

## Goma Internet Exchange Point (GOMIX) Launch

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**XAVIER KABEMBA**: Mr. President of the regulation organization, Mr. Principal advisor of the -telecom Minister, dear partners, ladies and gentlemen, I'm delighted to welcome you here today on behalf of ISPA-DRC and ISOC to this closing ceremony, to award certificates and launch officially GOMIX. We are here for an hour.

I can tell you that Congolese people and DRC can work together for the improvement of our sector. And that is how KINIX in Kinshasa was launched and LUBIX and today GOMIX is launched. We will have a ceremony online. We'll start with a video document, then there will be a few speeches, and finally, we will award the certificates to those who have attended the training. So first of all, we will look at the video that we're going to get posted for us now.

**VIDEO**: When you use the Internet, what happens? Whether you go online to chat with a friend or send mail or buy a book, or check the weather, watch a movie or study the Peloponnesian War, it feels like there's one wire connecting you directly to the thing you want. But a billion other people are connecting to a billion other things at the same time. How does that happen? It's really about making agreements.

Think of networking as a game. It only works if we agree to play by the same rules. Otherwise, it's not much fun. If you can get two or more computers to play together, you have a network. If your friend can do it, too, there's another network. But if you both agree that your networks will play the same way, now you can hook the two together, you have an Internet work. The rules we play by are

called the Internet Protocol. And as long as we all agree, we can keep adding more devices and more networks until the whole world is connected. That's what the Internet is a network of networks that share each other. Every device on the Internet has its own unique address.

Anything you send via Internet is really just a message from one device to another. But it doesn't travel in one big lump. It gets pulverized into tiny packets of data, each one wrapped with info about what it is, where it came from and where it's going. This way, your one message can actually take several different paths to its destination. Then by following the protocol, the receiving device knows how to put it all back together. The strength of the Internet is that it's decentralized. With so many possible connections, there is no single point of failure. If one path gets overloaded or broken, your data just takes a different path. Even if a big chunk of the Internet gets wiped out, your message can still find its way. But let's say you use one Internet provider and your friend is on a different one.

How does your data really get from one network to the other. Some companies make private connections with each other to exchange traffic. But more and more traffic is flowing through shared service platforms we call Internet exchange points. an Internet exchange is a place where many different organizations come together to interconnect their technology. There may be access providers, broadcasters, publishers, social network sites, telecom operators, really anybody who relies on network traffic can benefit from the exchange. By connecting in a common place, they save costs, and the traffic between them close faster and much more efficiently.

Traditionally, providers have sold each other passage on their networks. But for some providers who regularly exchange traffic, all that buying and selling and get to be more trouble than it's worth. Many of them saw that if they just agreed to meet each other halfway, then everybody's costs go down and the traffic moves more smoothly. providers are able to make a single connection to the platform to exchange traffic with many participants.

This way of doing things is called peering. And it's making the Internet faster and more affordable for everybody. The exchange participants make deals with each other according to mutual benefit. So the peering system tends to regulate itself. It may seem like companies are giving away their services. But in fact, each is providing their part of the whole solution their customers need to most efficiently and reliably exchange traffic.

The Internet is open, decentralized and totally neutral. Its intelligence lives at the edge, not in the core. No single organization controls it. And that's why it works as well as it does. by agreeing to cooperate. We all make the Internet happen and that's how the Internet happens.

**XAVIER KABEMBA**: Thank you. Very interesting video that describes what we're trying to do here together. So first of all, I would like to invite Laurent Ntumba to give his speech. He's the President of ISPA-DRC.

**LAURENT NTUMBA**: Mr. President of the regulation authority. Mr. Principal advisor to the Minister in charge of telecommunications, and ICT. Board members of ISPA-DRC, and Directors of the

various organizations that are members of ISPA-DRC, dear guests. I would like to welcome you all to this brief ceremony. Dedicated to the closure of a project that started nearly 10 years ago.

At the time, we wanted to create an IXP, thanks to partners who have been in the sector for a long time, the project has evolved over time. And as ISPA-DRC, we have already launched, we already launched in 2020, KINIX in Kinshasa. It evolved slowly, because as you could see, in the video document, agreements have to be reached in order to exchange. And it was complex, to begin with.

But now, we also have -- it has evolved over time, and we now also have LUBIX and today we're in Goma for the launch of GOMIX. I could say at last we've reached the end of our project, but in fact, I can't say that because each time we've established an infrastructure then we have had to also follow-up with a training to ensure the future of the system. And as far as the future is concerned, ISPA-DRC has put together a model which has now become a model over the whole continent. Because it is quite a performance to have established one, then two, then three. And I think that this is recognized by the various organizations on the continent. And we can already foresee that there will be other IXP in future.

The advantage of this -- of this system is that we really set out to create a neutral structure where the ecosystem, all operators, all participants could give their opinion on -- about the establishment. And there really was a patriotic impetus among us at the start. So that resources were provided to act on the basis of this impetus. It started in a very small room of a square meter room, but it is this impetus at the start that allowed us to gather all our efforts and put aside our differences, and the competitive element.

We hope that the young people who are being trained here in Goma will continue this work. So that the communities can benefit from what is our Internet. Because we had really the opportunity to create it. And to exchange. I also have to say to you that ISPA-DRC is a nonprofit organization. It is not a company that trades in anything. Thanks to the entire community, we want to make available to our communities the infrastructure so that, in order to make life easier for them.

ISPA-DRC is made up of members. Before mentioning them, I have the honor to preside this association today, and I would like to really to commend the management Committee today as well as the operation management team, Mr. Jean Claude Mimuke is the President and Professor Agea, who is also a member of the Committee and friend. And the working team, if I may call it that, when we came to Goma, we... so I want to mention Mr. Nico, who is part of the working team, recruited here in Goma. And behind that, there is a whole organization, but in Kinshasa, it is made up of very few people. It is only three, plus the technical Committee encompassing all operators, technicians, so it's an aggregate of engineers, which means that when we get together, we can always find a solution to a technical problems. The members I haven't mentioned yet are network administrator, -- Madam Danielle, taking part in the IP4 training session. Because we have training sessions on specific resources and technologies. And he is now himself a trainer, recognized over the whole continent and able to train the local communities and the training that's just taken place

in Goma has been done with local resources. He's from the Academy in Kinshasa. We want to have such Academies and schools everywhere because the more we master the technology, the more we'll be able to move forward.

And for me, it is particularly pleasing. I remember the deal with Daniel, because I remember -- I remember him because he always used to say, we have to have ownership of the technology. And now that we have made -- put a list together ourselves, is really an achievement. So who are the members of ISPA-DRC? The organization represented by the person I've just mentioned is also VODACOM who is also here. The trade Director is VODACOM is also going to be represented. There is orange. I don't know if there is a representative of Orange in the room. We have telecom. Mikuku, shabaz. And we have the stand united, comtech, so as you can see, we have many partners.

And as ISPA-DRC, our objectives are to promote the cooperation between the various operators. To participate in the main fora, in the sector, in the world. So that we can learn more. And also I would like to thank the representative of our regulator, we're very thankful, grateful to you for making the time to attend. I'd like also to thank the main advisor of the telecom Minister, first Minister. So thank you very much also for attending this event. So capacity building, that's the young people who've been trained. You haven't been trained for yourselves only because we think that if you have been trained, you will be able to train others, we want to create a synergy so that DRC be a resource for the continent in terms of capacity building. I think we will be able to move forward in this way. All of this was made possible because we have partners. Because there are advantages to an IXP. If there is a cache connected, then it gives access to other data. And we now have the platform in Goma. So then...

We have partners, ISOC that has really helped us and accompanied us all the way. I would like to hear -- recognize this and thank its representative. We are also a member of the European association of IXP. And we have other partners, AFRINIC because we have to have access to resources, of course, we need what's called an AS number. We need to know all the rules. We need to follow the standards, the rules, as we were told in the video. And if the rules are followed, then we can move forward fast. So we are now able to exchange data, thanks to the IXP. It also promotes content production and we need to be shadowed to be accompanied by a number of organizations. And what has been done is certainly a model now for the rest of the continent, and others will say it, I'm sure. For the Internet to develop further, we need incentives to develop connectivity. We really need some tacks -- taxes to be abolished. Some are really no use for anything. And in a way, we need in the east, where we are, there are many clandestine operators in our city. There is a multiplication of clandestine, illegal operators. We need a strict regulation therefore. And we will always be with you to help you and to make sure that things are better. Because we have resources, we have people, we have systems in our country. So there is no reason why we can't develop. So yet again, I would like to thank you for your attendance at this event. This specialized event. And we would like to thank the President of the regulation authority which is sponsoring this event. Thank you very much.

XAVIER KABEMBA: Thank you, President. We're now going to have the speech by the ISOC representative online. Yes, okay, Mr. Michuki is going to speak on behalf of ISOC, as the representative of ISOC. Mr. Michuki, I hand over to you.

MICHUKI MWANGI: Thank you, Mr. Xavier. Good morning everyone. My name is Michuki Mwangi. I would like to recognize the presence of the principal advisor of the Minister in charge of telecommunications, the President of ARPTC, the Chairman of ISPA-DRC Mr. Laurent Ntumba. And board members of ARPTC. Representatives and executives from various stakeholders in DRC. Colleagues and partner organizations, ladies and gentlemen, good morning, good day.

We are -- at the Internet Society remain committed to support the IXP DRC. ISOC has cooperated with ISPA-DRC for a decade and recognize this as a decade of partnerships. It started with a technical workshop, which resulted in the set up and connection of the fast networks of KINIX in Kinshasa in 2012. We continue to collaborate and in 2017 we implemented the peering to Kinshasa to increase awareness and role of stakeholders, and to ensure the peering and consistence in DRC. We continue to work with a team in DRC, getting them to various events across the continent, in the African Internet summit and many others.

And in 2019, we collaborated again with ISPA-DRC and with support from Facebook to set up a Commission the Lubumbashi IXP. Or LUBIX. I am proud to have them present during the lounge. I'm saddened that I'm not able to be there at this time, but look forward to more opportunity when we are able to visit the facility in Goma. During this period, we have also been able to, behind the scenes, provide the technical support and equipment needed to get both KINIX and LUBIX not just operational, but upgraded as the demand has needed. At the same time we continue to provide all the necessary support needed going forward to help GOMIX to grow and become as impactful as the other two IXPs.

At Internet Society we focus on building strong and resilient technical communities so we have an open, globally connected, secure, and trustworthy Internet. The ISPA-DRC community is among the strongest in the Region. I say this with full conviction because they have been able to accomplish a lot.

I would like to take this community to commend the ISPA-DRC, the local technical community for their dedication and focus which resulted in the commissioning of the new IXP in Goma, this is done despite the ongoing global challenges and a number of other challenges that we have seen. As we all know, Internet exchange points can bring faster, cheaper, and better connectivity. We are pleased to see how the ISPA-DRC and the Internet community in DRC has embraced the spirit of collaboration in partnership with both global Internet organizations and also local stakeholders to advance the Internet ecosystem in the country. We're particularly proud about the impact that the two existing IXPs in Kinshasa and Lubumbashi are having on the local community and the entire digital ecosystem in DRC.

It will be remiss of me to not mention the efforts that have gone on behind the scenes. Most of you may not know this, but if you go back the entire history of DRC and IXP development, it has been facing quite a number of challenges. There's a time when the KINIX facility, where it was located in Kinshasa burned down. And within a couple of weeks, two to three weeks, KINIX had come up in a new location, better location, well-connected, well-powered and continued to serve the community. All of this took place because the stakeholders came together and made that a reality. Lubumbashi had quite a number of challenges with the facility, with power, et cetera. The community came together to make it a reality.

Goma has had its recent fair share of challenges. There was recently the volcano eruption. And that compounded with the pandemic. And still, the community made all of this come together and be realized today because they were able to work through all of the challenges, making sure they provided all the resources that were needed to build this facility. So as a result, what we're seeing is ISPA-DRC and DRC as a whole is emerging as a clear leader on Internet matters in the Central Africa Region. Now DRC is the first and only Region to have three IXP and joins others than Tanzania and Nigeria and Kenya to have more than one. There is many events, such as the African peers and Internet connection Forum and others and have hosted the AIS event virtually in 2021. A lot of these regional and international engagements have actually positioned DRC as a critical and important market. And this is attracting important investments from local, regional, international stakeholders that are really helping DRC to make significant strides in developing its Internet ecosystem.

At this juncture, I would like to take the opportunity to thank our partners. Specifically I would like to thank Facebook for their ongoing collaboration on IXP development which allows us to develop the IXPs, KINIX, LUBIX, GOMIX over the last years with technical support, equipment, and training.

Distinguished guests, ladies and gentlemen, this is not the end. I think Mr. Laurent mentioned that in his opening remarks, that there's the next phase that is coming forward. I like to put that on the table. That the next phase of development will be trying to achieve the vision 80/20, which is a goal which looks at trying to ensure that 80% of all the Internet consumed in DRC is accessible locally. And only 20% of that is it sourced or brought from outside the country.

Now, we recently undertook a study. Our most recent one was launched in July. It is titled moving towards an interconnected Africa, the 80/20 initiative. And in that study, we took a deep analysis of DRC. And it shows that in that report, that operators aggregate are able to save an aggregate of 4.6 million USD per year on IP transit because of the work on the IXP, LUBIX and GOMIX, which is about 2 hundred thousand per year on the exchange points. We believe the launch of GOMIX in Goma will only increase the benefits that are operators and networks have been able to achieve from the current -- from being connected to the existing two exchange points. In addition to that, the report offers some recommendations to DRC on how to improve on its policy, capacity building and IXP services. We hope that the local technical community will consider these country specific recommendations and the general growth enablers that were shared in the report to realize the

full potential of the Internet ecosystem in the country. I will invite you to take a look at this report, which is also available in French, and really look forward to the continued collaboration that we have with the community in DRC.

I would like to conclude by thanking everyone, and the team that has been involved, not forgetting to mention the technical team, Nico, and everyone else for all their efforts to make this set up and launch of the Goma IXP a success. Thank you very much.

XAVIER KABEMBA: Thank you, Mr. Michuki. Thank you to ISOC. As you can see it is a significant achievement for DRC to have a third IXP. We're the only country to have achieved this. I think it is worth celebrating. I would also like to thank all our partners. Now, we're going to pass the floor to the Facebook representative.

BEN RYALL: I am Ben Ryall and working with Jacob, we look after the Facebook aspect in sub-Saharan Africa and that included DRC. We're glad to be part of the Goma IXP launch. We can't be there in person today we look forward to be back in the future, meet all of you in person and see the great infrastructure being built. We never stop being amazed by the ISPA-DRC team and leadership to push forward in the projects in the challenging time locally in Goma and over the field. And prouder to be supported and connected to the IXP. Community-led, regional IXPs are key to our strategy in sub-Saharan Africa and in the DRC. It allows us to continue to bring the Facebook product family closer to the people using our products and gives us an opportunity to partner with IXPs, MNOs and people in the local community and local industry and grow the ecosystem further. Leaves us to say, thanks to everyone, the ISPA-DRC leadership and in-country technical teams and congratulations on the launch. Merci beaucoup.

XAVIER KABEMBA: Thank you. As you can see, Facebook as a company, as a business is experiencing a real development in DRC thanks to these IXPs.

So it's a pleasure to have representatives of the regulator and Government. I don't think we've had the pleasure of welcoming you yet. So it is a real pleasure and a real honor. I would really like to celebrate and praise the presence of our regulatory representative and Prime Minister representative. I would now like to invite the principal advisor for the Prime Minister in charge of telecommunication and ICT. Mr. Tony Mulongo, please take the floor.

TONY MULONGO: Dear President, esteemed guests, members of the training, hello. It's a real honor to have been invited to this ceremony, and we would like to thank the organizers, it's a real honor to be here.

The Prime Minister, head of Government stated in his investiture speech that he wanted to focus on communication technologies and ICTs. Because for him, these are at the heart of development. They're the heart of Resolutions identified by the Prime Minister and His Excellency wants to prioritize this theme. And wants to support any initiative that facilitates the transmission of knowledge and support and capacity, it is constantly evolving and developing. And to achieve these objectives, the Prime Minister needs, first and foremost, to see synergies, collaboration between state that we represent and the industry. So that we can achieve these objectives together and see concrete success.

For instance, the development of an IXP, because it enables better Internet access and cost -- has cost benefits. It will have a direct impact on Internet users in the area, and it is also opening opportunities for CDNs. Therefore, we would like to seize this opportunity to praise ISPA-DRC, who have managed to bring together key stakeholders. And it's an achievement considering the work needed to set up these agreements. So following KINIX and LUBIX, it is a pleasure to celebrate the launch of GOMIX. You can all be extremely proud of this achievement and I would like to praise you for your work. What we really want to see is that thanks to this IXP and the training, we see more development. This is key, and we believe that this is really crucial to see more initiatives thrive. So thank you very much. It is my first visit to Goma. And I would like to thank you for this wonderful welcome. So it is a real pleasure to be here. Thank you very much.

XAVIER KABEMBA: Thank you very much. As the principal advisor has stated we're in the process of launching GOMIX. It was a dream not long ago, it's now a reality. Between KINIX and LUBIX, it was quite a few years. There was a much shorter time span between LUBIX and GOMIX and thanks to the partnership we have in place, we can continue to progress even faster. I would now like to welcome the President of the ARPTC. What I can tell you is that he's one of us. He's a member of our sector industry. And he's also made it possible for us to feel that we were being hunted. We are not prey being hunted any more. He made us feel that we're partners. And we have always been treated very respectfully and very kindly by the President of the ARPTC. Mr. Christian Katende.

CHRISTIAN KATENDE: Dear principal advisor to the Prime Minister, President of the ISPA-DRC, ISOC Director General, representatives of telecommunication operators, guests, ladies and gentlemen, it's a real pleasure and an honor to be with you here today for the launch of Goma's IXP. Named GOMIX. It is an initiative launched by ISPA-DRC. And has been achieved for the benefit of the local population. We are very pleased to support this exchange point. It's one of the three IXP s of DRC and it is crucial for the development of Internet in our country. IXPs are crucial to optimize costs and to improve Internet provision.

An IXP is really a cornerstone in terms of development. It enables a more optimal access to Internet. And before we set up GOMIX, there was no interconnection between local operators. So they had to transit through foreign providers. And it was complex as well for anyone who wanted to access content provider site. So the rerouting was complex. But now, with the local interconnection for Internet providers, they can share Internet. They can share their networks. And it means that the exchange of traffic won't need to go through foreign providers. It will have a very positive impact. It will make traffic in Congo -- Internet traffic in Congo much faster, much more reliable. That's why an IXP will be essential for the transit and hosting of local content.

Developing this IXP goes hand in hand with the development of ISPs and that's significant. We'll see an increase in Internet traffic. That is key for public spaces and it is inclusive of Internet and Internet structures. We are going to holdover 100 events to raise awareness. And it will be beneficial for Goma and the Region. It will enable us to bridge the Internet gap and foster development. And we're very proud that DRC is one of the very few African countries to proudly have three IXPs. And I encourage you all to make the most of this infrastructure and join these IXPs.

I would like to praise the work of DRC IXP because they have been developmental in the creation of the three IXPs. Namely KINIX in 2012, LUBIX in 2017 and now GOMIX. It is testament to the skills we have and it lays the groundwork for future IXPs. The drive comes from the head of state, and it -- he wants to interconnect the whole country quickly to fully embrace communication society. So we need to have strongly connected networks which are easily accessible in serving the needs of the whole population.

One of the points mentioned by the President of ISPA-DRC was the role of Internet providers, clandestine Internet providers, we want to tackle these providers, we want to clamp down on illegal provision. And soon we will make it possible to all stakeholders to have access to information regarding legal operators. It will be very easy to search for legal operators on our website. There will be a database listing who is an official ISP and who is not. Similarly, when we're looking at the existence of an IXP, you mention that regulators were not necessarily actively involved in the launch of this IXP. But I would like to remind you that my first presentation as Vice President for the launch of IXP, I can't remember the exact location, and I was very interested from the early onset in this type of project. I exchanged with Michuki, for instance. And I'm delighted to see that this project, which is a long-term project has come to fruition. It is thanks to operators and the stakeholders. So it is a success. I do indeed come from this industry. I've been involved in it for many years, and I think that it's time that we highlight what drives the sector forward.

So I am delighted to officially declare that the third IXP of the Democratic Republic of Congo GOMIX is open!

XAVIER KABEMBA: We now ask the President to award the first certificates to the beneficiaries of the awards. And we're going to call the recipients to the stage 1 by one to be awarded their training certificate.

## [Calling awardee names]

XAVIER KABEMBA: Thank you very much, President. We won't take up more of your time. I would like to ask the principal advisor's patience and see if he would mind handing out awards in absent absentia? [Calling awardee names]

XAVIER KABEMBA: Thank you, Mr. Principal advisor. I would like to invite the honorary President of ISPA-DRC.

[Calling awardee names]

XAVIER KABEMBA: Thank you, President. Last but not least, I would like to invite our President Mr. Laurent Ntumba. He's always looking towards the future. Accompanied by his Vice President, he's currently injured.

## [Calling awardee names]

XAVIER KABEMBA: Unfortunately, the other recipients are not present in the room. I don't think I have anyone else present in the room. I would like to invite you to applaud all these recipients. President Tony Mulongo will give the closing remarks. Afterward there is a cocktail. I would like to invite you to applaud yourself because you are key contributors in a.

TONY MULONGO: In a known and exciting launch. We want to make this known entity known. I'm forgotten to mention a few names. I'm sorry. I don't know if Ben is still here. Ben. Well, I would like to take this opportunity -- oh! Ben. How are you?

BEN RYALL: I'm good, thank you.

TONY MULONGO: From Facebook, we know it was very hard to do these things. But we see that we have a very good partner. We count on you, and I ask you, I ask you to greet Mr. Andrew, who is not there today. And if it's possible after COVID, you are welcome in Goma, because it is a very good place. Thank you very much, again. Facebook: Thank you for the kind words. We're happy to continue our support. As soon as we can get to Goma, we would love to take you up on the invitation to come and see the city and see the IXP.

LAURENT NTUMBA: Thank you very much, Ben. This brings us to the end of today's ceremony. As the President of ISPA-DRC GOMIX is online. I would like to invite you to make this known so that people come and get content from Goma because it is now possible. We would like to thank the authorities and the collaboration with the ISP. We will continue to look for your support. Thank you, and enjoy yourselves in Goma.